

## CLAIMS

We claim:

1. A data processing system, comprising
  - a text-based host including a workstation server;
  - a workstation including a graphics capable client;
  - a graphics application on said host;
  - said client being operable for negotiating a connection with said host on a first port;
  - said client being further operable for informing said workstation server that said workstation is graphics enabled and that said graphics capable client is waiting on a second port;
  - said workstation server being operable for establishing

13 a connection to said second port for communication  
14 between said graphics application and said graphics  
15 client.

1 2. The data processing system of claim 1, said workstation  
2 further including a graphical user interface for interfacing  
3 between a user and said graphics capable client on behalf of  
4 said graphics application.

1 3. The data processing system of claim 2, said client  
2 being a Telnet-based client, said graphical application  
3 being a Java graphical application, and further comprising:

4 a Java Virtual Machine for executing said graphics  
5 application;

6 a windowing toolkit responsive to IP address and port  
7 attributes from said Telnet-based client for  
8 establishing at least two independent connections to  
9 the IP address of said workstation, at least one of  
10 said independent connections being from said Java  
11 Virtual Machine to said graphics enabled client.

1 4. The data processing system of claim 3, further  
2 comprising a Java Virtual Machine and virtual device support  
3 for a plurality of client and hardware configurations,  
4 thereby providing application platform independence for a  
5 plurality of workstation architectures.

1 5. The data processing system of claim 4, further  
2 comprising:

3 a plurality of graphical applications for performing  
4 language and work management functions;

5 said Java Virtual Machine and virtual device support  
6 providing language and work management functions  
7 simultaneously for a plurality of workstation clients.

8 6. The data processing system of claim 5, said text-based  
9 host providing a centralized store and support for a  
10 plurality of text-based applications and graphics-based  
11 applications.

1 7. The data processing system of claim 6, said  
2 applications including applications for executing backup and  
3 recovery processes.

1 8. The data processing system of claim 6, said text-based  
2 host further providing for centralized upgrading of said  
3 applications applicable to all workstations without  
4 requiring routine upgrading of hardware or software of said  
5 workstations.

1 9. The data processing system of claim 6, said text-based  
2 host providing a single source for application service  
3 providers, including consulting, leasing, and marketing text  
4 based and graphical applications.

1 10. The data processing system of claim 2, said text-based  
2 host providing support for thin clients having graphical  
3 capability.

1 11. A data processing system, comprising:

2 a text based host system;

3 a Java virtual machine on said text based host system  
4 for executing both text based and graphical  
5 applications;

6 a workstation server on said host system for connecting  
7 said host system to a plurality of ports at a client  
8 workstation, at least one of said ports interfacing a  
9 graphical client and another of said ports interfacing  
10 a Telnet-based client.

1 12. System for executing multimedia applications on a text  
2 based host for input/output with respect to a multimedia  
3 enabled workstation, comprising:

4 a library of multimedia enabled applications;

5 a Telnet-based client for negotiating a connection with  
6 said host on a first enabled port and informing said  
7 host that said workstation is multimedia enabled and a  
8 multimedia enabled client at said workstation is

9 listening on at least one second port for multimedia  
10 application data;

11 said host selectively for establishing a multimedia  
12 connection from a virtual machine executing a selected  
13 application to said second port on the client for  
14 presentation of a multimedia application interface at  
15 said multimedia enabled client.

1 13. System for executing multimedia applications on a text  
2 based host for input/output with respect to a multimedia  
3 enabled workstation, comprising:

4 a library of multimedia enabled applications;

5 a server for negotiating a connection with a  
6 Telnet-based client at said workstation on a first  
7 enabled port and receiving from said Telnet-based  
8 client indicia specifying that said workstation is  
9 multimedia enabled and a multimedia enabled client at  
10 said workstation is listening on at least one second  
11 port for multimedia application data; and

12       said host selectively for establishing a multimedia  
13       connection from a virtual machine executing a selected  
14       application to said second port at said workstation for  
15       presentation of a multimedia application interface at  
16       said multimedia enabled client.

1       14. Method for executing multimedia applications on a text  
2       based host for input/output with respect to a multimedia  
3       enabled workstation, comprising the steps of:

4               negotiating a connection with a Telnet-based client at  
5               said workstation on a first enabled port;

6               receiving from said Telnet-based client indicia  
7               specifying that said workstation is multimedia enabled  
8               and a multimedia enabled client at said workstation is  
9               listening on at least one second port for multimedia  
10              application data; and

11              selectively establishing a multimedia connection from a  
12              virtual machine executing a selected application to  
13              said second port at said workstation for presentation  
14              of a multimedia application interface at said

15 multimedia enabled client.

1 15. A program storage device readable by a machine,  
2 tangibly embodying a program of instructions executable by a  
3 machine to perform method steps executing multimedia  
4 applications on a text based host for input/output with  
5 respect to a multimedia enabled workstation, said method  
6 steps comprising:

7 negotiating a connection with a Telnet-based client at  
8 said workstation on a first enabled port;

9 receiving from said Telnet-based client indicia  
10 specifying that said workstation is multimedia enabled  
11 and a multimedia enabled client at said workstation is  
12 listening on at least one second port for multimedia  
13 application data; and

14 selectively establishing a multimedia connection from a  
15 virtual machine executing a selected application to  
16 said second port at said workstation for presentation  
17 of a multimedia application interface at said  
18 multimedia enabled client.



1       16. A computer program for executing the steps comprising:

2           negotiating a connection with a Telnet-based client at  
3           said workstation on a first enabled port;

4           receiving from said Telnet-based client indicia  
5           specifying that said workstation is multimedia enabled  
6           and a multimedia enabled client at said workstation is  
7           listening on at least one second port for multimedia  
8           application data; and

9           selectively establishing a multimedia connection from a  
10          virtual machine executing a selected application to  
11          said second port at said workstation for presentation  
12          of a multimedia application interface at said  
13          multimedia enabled client.